(h) *Emergency vehicle AECDs.* If your engine family includes engines with one or more approved AECDs for emergency vehicle applications under paragraph (4) of the definition of ''defeat device'' in §86.1803, the NTE emission limits do not apply when any of these AECDs are active.

### § 86.1372–2007 Measuring smoke emissions within the NTE zone.

This section contains the measurement techniques to be used for determining compliance with the filter smoke limit or opacity limits in §86.007–11(b)(1)(iv).

(a) For steady-state or transient smoke testing using full-flow opacimeters, equipment meeting the requirements of subpart I of this part or ISO/DIS–11614 ''Reciprocating internal combustion compression-ignition engines—Apparatus for measurement of the opacity and for determination of the light absorption coefficient of exhaust gas'' is required. This document is incorporated by reference (see §86.1).

(1) All full-flow opacimeter measurements shall be reported as the equivalent percent opacity for a five inch effective optical path length using the Beer-Lambert relationship.

(2) Zero and full-scale (100 percent opacity) span shall be adjusted prior to testing.

(3) Post test zero and full scale span checks shall be performed. For valid tests, zero and span drift between the pre-test and post-test checks shall be less than two percent of full-scale.

(4) Opacimeter calibration and linearity checks shall be performed using manufacturer's recommendations or good engineering practice.

(b) For steady-state testing using a filter-type smokemeter, equipment meeting the requirements of ISO/FDIS–10054 ''Internal combustion compression-ignition engines—Measurement apparatus for smoke from engines operating under steady-state conditions—Filter-type smokemeter'' is recommended. Other equipment may be used provided it is approved in advance by the Administrator.

(1) All filter-type smokemeter results shall be reported as a filter smoke number (FSN) that is similar to the Bosch smoke number (BSN) scale.

(2) Filter-type smokemeters shall be calibrated every 90 days using manufacturer's recommended practices or good engineering practice.

(c) For steady-state testing using a partial-flow opacimeter, equipment meeting the requirements of ISO–8178–3 and ISO/DIS–11614 is recommended. Other equipment may be used provided it is approved in advance by the Administrator.

(1) All partial-flow opacimeter measurements shall be reported as the equivalent percent opacity for a five inch effective optical path length using the Beer-Lambert relationship.

(2) Zero and full scale (100 percent opacity) span shall be adjusted prior to testing.

(3) Post-test zero and full scale span checks shall be performed. For valid tests, zero and span drift between the pre-test and post-test checks shall be less than two percent of full scale.

(4) Opacimeter calibration and linearity checks shall be performed using manufacturer's recommendations or good engineering practice.

(d) Replicate smoke tests may be run to improve confidence in a single test or stabilization. If replicate tests are run, three additional tests which confirm to this section shall be run, and the final reported test results must be the average of all the valid tests.

(e) A minimum of thirty seconds sampling time shall be used for average transient smoke measurements. The opacity values used for this averaging must be collected at a minimum rate of 1 data point per second, and all data points used in the averaging must be equally spaced in time.

[65 FR 59962, Oct. 6, 2000]

### § 86.1375–2007 Equipment specifications for field testing.

For testing conducted with engines installed in vehicles, including field testing conducted to measure emissions under Not-To-Exceed test procedures, use the test procedures and equipment specified in 40 CFR part 1065, subpart J.

[70 FR 34619, June 14, 2005]

### § 86.1380–2004 Load response test.

(a) *General.* This section applies to 2004 through 2007 model year heavy-duty diesel engines. The purpose of this